

E-Filed: January 28, 2015

NOT FOR CITATION
IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

UNITED STATES OF AMERICA FOR
THE USE OF SAN BENITO SUPPLY,

No. C13-00469 HRL

Plaintiff,

**MEMORANDUM OF DECISION,
FINDINGS OF FACT AND
CONCLUSIONS OF LAW**

v.

KISAQ-RQ 8A 2 JV; et al.,

Defendants.

MEMORANDUM OF DECISION

A. INTRODUCTION

This case was tried to the court for nine days between November 17 and December 2, 2014. Many witnesses were called and hundreds of exhibits admitted. At the conclusion of their presentations, counsel argued, and the matter was taken under submission. The court now issues its Memorandum of Decision (Memorandum), Findings of Fact (Findings), and Conclusions of Law (Conclusions).¹

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¹ The Memorandum fleshes out and gives context to the Findings and includes some explanation of why the court made the Findings that it did. No attempt has been made to describe all the evidence or every issue the parties raised, or to name all the witnesses and give the substance of their testimony. Likewise, the court has not mentioned all the evidence that supports its Findings and Conclusions. Finally, the court tried to avoid commingling Findings with Conclusions. However, if any Conclusion has been inadvertently labeled as a Finding (or vice versa), it should be considered in its true light regardless of the label on it.

B. STATEMENT OF THE CASE

This is a Miller Act case. San Benito Supply (“SBS”),² a concrete ready-mix supplier, was a sub-subcontractor on a government construction project at Fort Hunter Liggett in southern Monterey County. It sues to recover about \$300,000 it claims it is owed for concrete supplied for the project. Defendants are the project’s general contractor/designer KISAQ-RZ 8A 2 JV (“KISAQ”), its concrete subcontractor Frazier Masonry Company (“Frazier”), and two surety companies: Federal Insurance Company (“Federal”) and Western Surety Company (“Western”). The dispute is between SBS and Frazier. The other defendants are named in case a judgment in favor of SBS needs to be paid.

Frazier does not dispute that there are unpaid SBS invoices, but argues that SBS supplied nonconforming ready-mix concrete that ultimately had to be torn out by Frazier and replaced at substantial expense. It counterclaims against SBS for about \$300,000, and argues that any monies it lawfully owes to SBS (excluding, of course, the price for the nonconforming concrete) should be set off against Frazier’s damage recovery.

In late 2009 the U.S. Army Corps of Engineers (“ACOE”) entered into a contract with KISAQ for it to design and build a Tactical Equipment Maintenance Facility (“TMEF”) at Fort Hunter Liggett. This was to be a rectangular, one story structure with tilt up concrete walls, a concrete slab floor, and several large doors so that military vehicles could be brought inside for maintenance and repairs. Because some of the vehicles were extremely heavy, a section of the floor slab was specified to be heavy duty 6000 psi concrete (meaning the concrete had to have a compressive strength of 6000 pounds per square inch so that it would not fail under extra heavy loads). Exh. 50.7, 50.8. This case is about 6000 psi concrete.

KISAQ awarded the subcontract for the masonry work on the TEMF project to Frazier. Thereupon, Frazier invited proposals from prospective suppliers of ready-mix concrete. This would be a big job, and SBS was very interested in obtaining it. Preliminary discussions between Charles

² Because of a peculiarity in the Miller Act, the plaintiff in a claim arising over a government construction contract must nominally bring suit in the name of the United States (hence the name in the case caption: “United States of America, For the Use of San Benito Supply...”). For convenience, the Court will simply refer to the plaintiff as SBS.

1 Benford (“Benford”), Frazier’s Project Manager, and Teddy Schipper Jr. (“Teddy”),³ SBS’s Mine
2 Manager and one of its managing officers, began in the late fall of 2011. Teddy was SBS’s mix
3 designer.

4 Ready-mix concrete is a blend of aggregates, sand, cement, additives (sometimes), and
5 water. The TEMF project called for 3000, 4000, and 6000 psi concrete. Each would require a
6 different mix design. A mix design is the recipe for creating concrete of a particular strength with
7 certain specified properties.

8 The ACOE’s specifications for the TEMF project did not spell out any mix designs. Rather,
9 they called out the ultimate strength required, noted some limitations (e.g. no more than a certain
10 percentage of fly ash), some specific requirements (e.g. add steel fibers), and several permissible
11 ranges of variations in the concrete’s properties (e.g. design air volume, water/cementitious ratio,
12 etc.).

13 There are so many variables in mix design that no one can look at an unproven design, for
14 6000 psi concrete for example, and say for sure that—when put to the test—it will actually result in
15 concrete with a compressive strength of 6000 psi. The “Standard Specifications for Structural
16 Concrete” promulgated by Committee 301 of the American Concrete Institute (“ACI 301”) is
17 viewed by the concrete industry as the “bible” for qualifying concrete mix designs. That is, in a
18 situation such as the present, will the mix design achieve the strength result you need? Under ACI
19 301 there are two ways to qualify a mix design. One: someone comes up with his best judgment for
20 a design for the desired concrete strength, and mixes up trial batches (each with slight differences in
21 air/water volume). Then, using the detailed ACI 301 protocol, cure the samples the required number
22 of days and test each for compressive strength. Finally, evaluate the resulting data by a complex
23 mathematical formula to see if the mix qualifies. Alternatively: if one has actually used the mix (or,
24 one virtually like it) in the field for a number of jobs over a certain period of time and has historic
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26
27 ³ The court intends no disrespect in referring to Mr. Schipper Jr. as Teddy. The extended Schipper
28 family operates and apparently owns SBS. Since Teddy, Ted, Ben, and Mark Schipper each
testified at trial, it seems expedient to refer to any of them here by their first name.

1 field test data on compressive strength from those jobs, then tally and analyze that data per the step
2 by step procedure in ACI 301 to see if the mix qualifies.

3 On December 21, 2011, Teddy sent Benford preliminary mix designs, including one for the
4 6000 psi concrete. Exh. 6.7. They went to KISAQ and then to the project structural engineer, who
5 gave them preliminary approval. Exh. 56.3. At this point, SBS had not submitted any back up data
6 on compressive strength.

7 Then, on December 28, 2011, Teddy e-mailed Benford compression data on the 3000, 4000,
8 and 6000 mixes. Exh. 55.1. The data pdfs were labeled "mix... history." The history for the 6000
9 psi mix showed 21 individual test results after 28 days of curing that were well in excess of 6000
10 psi. Exh. 55.6-7. The word "history" meant that this was historical data from past jobs and not data
11 from batch testing.

12 On February 8, 2012, SBS sent Frazier a form "Proposal" quoting its prices for the concrete
13 and other material Frazier needed for the TEMF project. Then, SBS and Frazier met on March 30,
14 2012 at Frazier's office to hash out pricing. Benford wanted lower prices, and he and Ted Schipper
15 ("Ted") haggled back and forth using the Proposal as a worksheet. They ultimately agreed on prices
16 that were then circled and initialed on the worksheet and both signed. Exh. 152. That same day
17 Frazier sent SBS a letter stating that it intended to enter into a purchase order with SBS for the
18 concrete on the TEMF project. Exh. 525. On April 6, SBS prepared a "clean" copy of the Proposal
19 with the agreed upon pricing. Exh. 512.4. Several months later, on July 30, Frazier did issue the
20 Purchase Order. Exh. 516.1.

21 In the intervening time between April 6 and July 30, the mix designs went up the line
22 through an approval process, which ultimately put them on the desk of Karl Mai, the ACOE
23 materials engineer. And, during this process Mai directed some slight changes in the specifications.
24 Originally, they called for steel fibers to be added to the mix. Then, synthetic fibers were
25 substituted. Finally, back to steel fibers. The fly ash content, originally at zero percent, went to
26 10%. The second submission of mix designs went from KISAQ to Mai on May 25, 2012. Mai's
27 only comments upon reviewing them was to increase fly ash above the current 10%. Exh. 25.1-2,
28 .38-39. SBS changed each mix to 15% fly ash, and all revised mix designs that KISAQ had were

1 resubmitted on July 6 and approved. Exh. 524. The revised 6000 psi mix design, which had been
2 approved by the structural engineer along with the others, came to KISAQ after the others had been
3 submitted to Mai and was never forwarded to Mai, who never noticed it was missing. Exhs. 11.2,
4 710.1, 30.1-2. The word came down from the ACOE to pour the concrete for the slab.

5 Beginning about 3:00 a.m. on August 24, 2012 and continuing until about noon that day,
6 SBS trucks delivered 280 cubic yards (28 truckloads) of the 6000 psi concrete mix. Frazier
7 personnel placed the concrete and began the multi-step process of “finishing” it. During this same
8 time period SBS also delivered 254 cubic yards of the 6000 psi mix but without steel fibers. These
9 254 yards were placed by Frazier on the area of the slab that was specified for 4000 psi concrete.
10 (There was no need there for the extra strength provided by steel fibers.) Frazier figured it was
11 more convenient to buy the 6000 psi concrete (without fibers) than at some other time to place 4000
12 psi concrete adjoining the 6000 and have to fuss with the “joint” between the two.

13 While the pouring was going on, SBS took samples of the wet cement coming from some of
14 the trucks. (This is typical practice. The samples are called “companion cylinders.”) Also,
15 Frazier’s quality assurance and inspection lab, CTE, took samples.

16 As the concrete finishing was being concluded, softball-sized delaminations were observed.
17 That is, in a few areas a thin top layer of the concrete peeled or flaked away. This often meant some
18 aspect of the finishing was not done properly.

19 The specification “6000 psi” means that the concrete will have that compressive strength 28
20 days after it is poured and finished. Compressive strength is determined by subjecting a sample to
21 controlled, measured compression until it breaks. CTE “broke” some of its cast samples (with steel
22 fiber) after 28 days, and their average compressive strength was only 4570 ± 370 psi. It broke other
23 samples after 56 days, but the average compressive strength had only risen to 5150 ± 160 psi. Exh.
24 820. SBS’s testing of some of its companion cylinders produced equally disappointing results.
25 Exh. 534.1.

26 Since the compressive strength of concrete increases—up to a point—as time goes by, it was
27 hoped that eventually it would achieve the specified 6000 psi strength. But, it did not. SBS’s
28 expert, Geoffrey Hichborn, drilled out core samples from seven locations on the slab and tested

1 them at 101 days of age. Exh. 822. The adjusted average strength was only 5050 psi. The heavy
2 duty slab on grade was never going to get to 6000 psi.

3 On September 30, 2012, Frazier sent to SBS a “formal notice and documentation of non-
4 compliance,” which warned that, if slab strength did not get up to 6000 psi, any cost to rework or
5 replace it would be passed on to SBS. Exh.534.1. Between then and early December 2012, while
6 waiting to see if the passage of time would solve the low compression problem, the parties met
7 several times and exchanged frequent e-mails about how to fix the problem if time did not.
8 Hichborn proposed grinding off the top 1" or so of the slab (it was 7" thick) and topping it with a
9 super-strong epoxy. He never prepared plans or specs or did supporting calculations, and the
10 proposal did not generate widespread interest (at least in part because it would have cost about the
11 same as the sure fix of removing and replacing the slab). Exhs. 558, 586.

12 Discussions about alternate remedies ended when the ACOE, as was its right, directed that
13 the area of the slab requiring 6000 psi concrete be removed and replaced with concrete that
14 complied with the specifications. Exhs. 559.1, 717, 781, 783, 795. SBS declined to participate in
15 any of that work, and Frazier did the job using concrete from another supplier. Frazier’s costs were
16 \$312,430.90, and its Counterclaim sought that sum minus what it owed SBS for conforming
17 concrete and material. Exh. 817.

18 DISCUSSION

19 SBS wants judgment for its unpaid invoices and denies any responsibility for the failure of
20 the “6000 psi” concrete to achieve 6000 psi. Frazier acknowledges that it owes for some unpaid
21 invoices, but claims that what it owes is less than what SBS owes for the costs to remove and
22 replace the nonconforming concrete. The court begins by considering whether SBS was
23 contractually required to provide concrete which, if properly placed and finished, would achieve
24 6000 psi after 28 days.

25 SBS’s February 8, 2012 Proposal “offer[ed]” to sell Frazier 6000 psi concrete for \$122.84
26 per cubic yard. At the meeting on March 30, 2012, the two negotiated the price down to an agreed
27 \$121.00. Frazier’s letter of March 30 advised of its intent to buy. The negotiated prices were
28 confirmed in a clean copy of the Proposal that SBS sent on April 6, 2012. Frazier’s Purchase Order

1 of July 30, 2012 formally accepted the offer, and SBS subsequently performed by making deliveries
2 of what was supposed to be 6000 psi concrete.

3 In its Complaint, filed February 4, 2013, SBS alleged the “contract” between it and Frazier
4 consisted of Frazier’s Purchase Order as well as a separate SBS form Credit Application, which
5 Frazier had filled out and signed on April 4, 2012. However, by the time of the July 2014 Pretrial
6 Conference in this case, SBS had decided that the “contract” was actually formed when the two
7 parties initialed and signed the SBS Proposal after the negotiation over prices at the March 30, 2012
8 meeting. The court denied SBS’s request to formally amend its complaint but told its counsel he
9 could offer whatever proof he wanted to try to show the “contract” was really something other than
10 what had been originally pleaded. And, it is plain why he wanted to try, since the boilerplate
11 language in the Proposal says: “Quality Assurance program by others.” Here was language that, if it
12 was part of the “contract,” could possibly be the foundation for an argument that SBS had no
13 obligation to design a mix that would produce 6000 psi concrete.

14 SBS officers who were at the March 30, 2012 meeting with Frazier’s people testified that
15 “Quality Assurance program by others” was fully discussed. Reportedly, they told Benford that
16 language was there because SBS had no experience with 6000 psi concrete and would require
17 someone else, at Frazier’s expense, to qualify that mix. Once that was done, SBS would be happy
18 to use the design to batch and deliver the concrete to the worksite.

19 In direct contradiction, Frazier’s Mike Prascsak and Benford both testified that all they
20 discussed on March 30 was prices, and the initials and signatures were affixed to confirm the
21 penciled-in prices that were agreed upon. No discussion took place about the quality assurance
22 language. No one told them that SBS had no experience with 6000 psi concrete. (Indeed, Teddy
23 had months before sent Benford a design for a 6000 psi mix and historical data supporting it!) And,
24 Frazier was not asked to pay for batch testing, and would not have done so if asked. Designing and
25 qualifying the mix is the supplier’s job, not the buyer’s. The court found Prascsak’s and Benford’s
26 testimony credible. It rejects the testimony of the SBS witnesses.

27 Furthermore, Benford and at least one of Frazier’s experts testified that Quality Assurance
28 has nothing to do with concrete mix design. It is something that the project owner does or delegates

1 to someone else to do as work is done at the job site: sampling or testing at the point of placement.
2 (The company referred to as CTE was doing quality assurance when it took samples of the wet
3 concrete as it arrived on SBS trucks for the TEMF pour the morning of August 24, 2012.) The court
4 found this testimony credible as well.⁴

5 One reason the court rejects SBS's version of discussions at the March 30 meeting is that
6 nothing SBS said or did afterward was consistent with having washed its hands of any responsibility
7 for mix design. The e-mails between Teddy and Benford over the next four and a half months make
8 that clear. Teddy is the mix designer. He is not telling Benford that he is waiting on someone else's
9 design. There is no one else. Teddy is doing the designing and making mix refinements to address
10 some tweaking by the ACOE in the contract specifications.

11 Even more telling is the reaction of SBS when the problem with compressive strength arose
12 in September after some of the 28 day samples were broken. Recall Frazier's September 30, 2012
13 letter advising SBS that the purported 6000 psi concrete it had supplied was not in compliance with
14 the project specifications and warning, if the strength did not go up in 56 days, that SBS would be
15 responsible for any costs to remedy. Exh. 534. Ted e-mailed his reply on October 5, 2012. He
16 said: "[w]e too are committed to giving our customers the materials and service we promise." He
17 went on to question whether the compression break tests by CTE were done correctly. He wondered
18 whether steel fibers in the mix may have made a difference. He noted that fly ash could slow down
19 curing and suggested waiting for 56 days or longer and test again. Finally, he asked for payment on
20 current invoices except for the 6000 psi "... which is currently in question." Exh. 536. In a later
21 letter to Benford, Ted stated that SBS may offer to put up a warranty bond in favor of KISAQ and
22 the ACOE to dissuade either from precipitously requiring the removal of the slab. Exh. 69.2.

23
24 ⁴ At the same time as the TEMF project, another ACOE project was underway at Fort Hunter
25 Liggett: the "ECS Warehouse." Neither KISAQ nor Frazier was involved. But, SBS was. It had
26 the subcontract to supply ready-mix concrete. The ECS Warehouse project, unlike TEMF, had
27 concrete specifications that required a complex series of batch testings to qualify the mixes. Exh.
28 600. For that job, SBS's Proposal had the usual boiler plate about "Quality Assurance program by
others." It also said: "SBS is not responsible for mix development." Exh. 620.3. The absence of
the not-responsible-for-mix-development language in its Proposal for the TEMF job, Exh. 152, is
support for the court's finding that "Quality Assurance program by others" does not apply to mix
design.

1 Nowhere did Ted contend that SBS had no responsibility for mix design of the 6000 psi concrete.
2 There is no hint of a belief that low compression was someone else's fault and problem.

3 In an October 12, 2012 e-mail from Russell Frazier to Ted, Frazier joined Ted in hoping that
4 the slab's strength would increase over time to the desired level, but with the prospect of liquidated
5 damages being assessed by KISAQ for delay, asked for a statement of SBS's intentions if something
6 needed to be done to fix the problem. Exh. 540.2. Ted replied on October 29: "[W]e stand behind
7 our product Please be assured of our continuing diligence to find a fix which will be more
8 expedient than R and R [removal and replacement] of the slab." Exh. 540.1.

9 KISAQ, Frazier, and SBS had a meeting on October 16, 2012 at the jobsite to discuss how to
10 deal with the low compression strength results on the heavy duty slab. Exh. 671. SBS indicated at
11 the meeting it had no knowledge that anything Frazier did in the placement and finishing of the
12 concrete caused the low results. Exh. 587. KISAQ told Frazier to come up with a plan of action in
13 case the strength did not increase to an acceptable level. Exh. 671.3. (By industry standards, core
14 samples that reach an average of 85% of the designed strength, so long as no sample is less than
15 75%, would satisfy the strength requirement.)

16 As the court observed before, SBS's efforts to find a remedy other than removal of the slab
17 were unsuccessful, and Frazier did the work using a different supplier. SBS sued, Frazier
18 countersued, and sometime thereafter SBS changed its tune. The problem with low compressive
19 strength was not the fault of the mix design; it was because Frazier did not place and finish it
20 properly. The court heard much testimony from Ted and Hichborn about how Frazier's placement
21 of the concrete was bad; how Frazier failed to adequately consolidate it; why it was wrong to add
22 water to the mix at the site; the slump was off; precautions were not taken to account for the heat (it
23 had been a hot day); the elapsed time from batching at the plant to placement at the site was too long
24 for some of the truckloads; and so on. Ted said he observed all these problems when he was present
25 for a few hours during the long pour. The court finds this testimony to not be credible, and, if there
26 were crumbs of truth to these assertions, they were not a contributing cause of the low compression
27 strength. There was persuasive testimony from more than one well qualified witness that all of the
28

1 claimed failures of Frazier to properly place and finish, even if true, would not have affected the
2 slab's compressive strength.⁵

3 So, what was the cause of the low compression? Let's begin with the fact the mix design for
4 the 6000 psi concrete was not properly qualified.

5 Even Hichborn, SBS's fiercely partisan expert witness, agreed that a ready-mix supplier that
6 gives a mix history to a customer is representing that the mix had worked. And, as noted above,
7 Teddy gave Benford a history to go along with his 6000 psi design. Benford was entitled to rely on
8 what he was told: here was a proven mix. However, it was later discovered that this was, in fact, not
9 historical data gathered in accordance with the protocol in ACI 301. In fact, it was not historical at
10 all. It was a test batch done by Teddy of a 6000 psi mix he had designed in 2011 for a project at a
11 Target store location. SBS did not get the Target job, so it never, ever had actual field experience
12 with 6000 psi concrete. (It is not clear to the court whether Teddy prepared a test batch of this mix
13 in anticipation of SBS getting the Target job or because they were out to get the TEMF project.)
14 However, this was not trial batching following the complicated trial batching protocol called for by
15 ACI 301. It was something much more informal and incomplete. Indeed, this may be why Teddy
16 doctored and packaged the data to look like it was historical rather than from a trial batching.
17 *Compare* Exhs. 59.6-7, 69.1, *with* Exhs. 11.5, 55.6, 29.92, 25.39, 30.13. Benford thought he was
18 getting properly qualified concrete. Instead, he was getting a seat-of-the-pants mix that had never
19 been validated.⁶

20 We will never know if that final mix design (absent any last minute change) would have
21 produced actual 6000 psi concrete. The third and final submission of mix designs for formal
22 approval was supposed to do nothing more than increase fly ash from 10% to 15%. As the designs
23 went up the review chain, reviewers were looking for 15% fly ash. It was there, and they added
24 their approval. What no one noticed was that Teddy had made an additional change. He had added
25

26 ⁵ Indeed, samples taken of the wet mix in the trucks *before* placement and finishing did not come
27 close to the required compressive strength.

28 ⁶ Hichborn himself acknowledged that Teddy's mix design was no good. It had not been qualified
by either genuine historical data or by ACI 301 batch testing. It should not have been used. He said
the unqualified mix design was the "central reason" the heavy duty slab did not reach 6000 psi.

1 entrained air. Entrained air is a liquid product that, when added to a batch mix, creates microscopic
2 air bubbles in the mix. This additive (an “admixture” in concrete parlance) is often used in ready-
3 mix concrete that will be exposed to the weather. But the TEMF slab was indoors. And, everyone
4 in the concrete business knew that entrained air reduces compressive strength. Plus, the contract
5 specifications did not call for entrained air. The admixture is listed in Teddy’s final mix recipes, but
6 no one noticed it because no one was looking for anything other than increased fly ash.

7 Teddy testified that Benford called him and told him someone higher up the chain wanted
8 “air” added. (That meant entrained air as distinguished from the entrapped air that occurs when any
9 batch of concrete is mixed. Entrapped air is mostly eliminated when concrete is vibrated during
10 consolidation.) Teddy was opposed to adding air. Reportedly, he told his dad, Ted, who agreed it
11 was a “huge problem.” According to Teddy, Benford was also opposed, but orders were orders. So,
12 Teddy added air.

13 The court rejects Teddy’s testimony about being directed to add entrained air. First, it makes
14 no sense for anyone to want entrained air in mixes not exposed to the weather. Certainly not at the
15 final approval stage. Certainly not without doing batch testing. It was *not* in the specifications.

16 Benford strenuously denied that anyone told him to add air (indeed, there is no evidence
17 anyone did so) and likewise denied that he told Teddy to add air. The court believes Benford. In
18 part, the court believes Benford because when, earlier, Teddy had been told to make a design change
19 in the mix to add more fly ash, he asked for and received an e-mail from the ACOE confirming the
20 change. Exhs. 60, 61. The fly ash was a minor change to which Teddy had no an objection. Surely,
21 if Teddy had been told to add something he objected to, he would have insisted on seeing it in
22 writing. At the very least, he would have documented his objection. He did neither. Teddy added
23 entrained air on his own.

24 So, the next question is: if Benford did not tell Teddy to add air, why did he do it? The court
25 cannot say for sure, but Teddy may have been confused about which mix design he was dealing
26 with. The concrete specifications for the ECS Warehouse project did require entrained air, and SBS
27 was filling that order. How likely is it that he mixed up the mixes on two separate jobs? Normally
28 one would not expect that to happen. Here, though, Hichborn, while at the October 16, 2012

1 meeting about low compressive strength, distributed to everyone a memorandum he had prepared
2 which stated that the TEMF specifications called for entrained air in the concrete. The startled
3 Frazier participants at the meeting pointed out that Hichborn had mixed up the Warehouse
4 specifications with the TEMF's! Teddy denied he got confused over which specifications were for
5 what, but, if a high-powered expert like Hichborn could get confused going over SBS's mix design
6 paperwork, so probably could Teddy.

7 What we do know for sure is that SBS's mix (with air entrainment) failed to achieve 6000
8 psi strength. David Rothstein, a PhD geologist and concrete petrographer, conducted a petrographic
9 examination of two core samples from the TEMF heavy duty slab. He found excessive air in the
10 samples, more than the mix design called for. At most, the mix design called for 4% air. Rothstein
11 found 6 to 7.4%. That excess air would result in a 10 to 15% loss in compressive strength. In his
12 opinion, that is what happened here. Exhs. 553, 747, 760. The court understood Rothstein to mean
13 that the 6000 psi design may or may not have achieved the desired strength without entrained air.
14 But, with entrained air, it definitely flunked. The court finds this testimony credible and accepts it.⁷

15 In summary, SBS failed to provide conforming 6000 psi concrete as it contracted to do. Its
16 problem was it used a mix design that it had not properly qualified, a fact that it concealed.
17 Furthermore, it added an unauthorized admixture to the design that did not belong and which
18 guaranteed that the already very questionable mix design would fail to reach the required
19 compressive strength. SBS was not the third party beneficiary of any contractual obligation that
20 other TEMF project participants had, such as Frazier to KISAQ, or vice versa. SBS's failures are
21 not excused by any omission of Frazier or other project participants to ferret out and prevent SBS
22 from going off the rails.

23
24

25 ⁷ The entrained air is also why those small, circular delaminations occurred at places on the surface
26 of the slab as it was being finished. The surface was being "hard troweled" by Frazier people who
27 did not realize the mix contained entrained air. Hard troweling can cause delaminations if the mix
28 has entrained air. In any event, the delaminations did not affect compressive strength.
Delaminations also occurred on the slab area designated to receive 4000 psi concrete, but where
Frazier for its convenience had ordered and placed SBS's 6000 psi mix but without steel fibers.
Those delaminations were repaired, and the ACOE did not require removal and replacement of that
slab area.

FINDINGS OF FACT

1. SBS is a California corporation operating as a ready-mix concrete manufacturer based in Hollister, California.

2. Frazier is a California corporation operating as a licensed concrete and masonry subcontractor in California.

3. KISAQ is a joint venture composed of RQ Construction and KISAQ, LLC. It is organized under the laws of the State of California and operates as a general contractor.

4. Federal is an Indiana corporation and Western a South Dakota corporation. Both are qualified to operate as sureties in California.

5. In September 2009, KISAQ entered into a contract with the ACOE to design and build the TEMF at Fort Hunter Liggett in Jolen, California.

6. As required by the Miller Act, KISAQ obtained from Federal and Western payment and performance bonds in favor of the United States.

7. KISAQ entered into a written subcontract with Frazier, who was to supply and install the concrete necessary for the TEMF project.

8. Beginning in the fall of 2011, SBS entered talks with Frazier about furnishing to Frazier the ready-mix concrete needed for the TEMF project. Frazier gave SBS the project's concrete specifications.

9. SBS submitted to Frazier several Proposals as well as concrete mix designs for the different classes of concrete needed for the project. Further, it gave Frazier what it represented were historical data for each mix, including the extra strength 6000 psi concrete. In fact, the data on the 6000 psi mix was not historical, and that mix design had never been used on a job before or been properly qualified by careful batch testing. SBS had never done a 6000 psi job before.

10. When a ready-mix supplier gives historical data to a potential buyer, it amounts to a representation that the supplier has had previous jobs using the mix in question and that the mix performed as intended.

1 11. Representatives of Frazier and SBA met on March 30, 2012 and negotiated an
2 agreement on the prices per cubic yard that Frazier would pay for the various categories of concrete
3 and other material needed for the project.

4 12. SBS's Proposals each contained language: "Quality Assurance Program by Others."
5 SBS now claims that this language meant that someone else would have to design the mixes for the
6 different classes of concrete. The court finds that this language has nothing to do with mix design,
7 and that mix design was SBS's responsibility.

8 13. Also on March 30, 2012, Frazier issued a letter of intent to enter into a purchase order
9 with SBS for the project. Its Purchase Order accepting SBS's offer to sell was sent on July 30,
10 2012.

11 14. A portion of the slab floor in the TEMF building was to be extra strong 6000 psi
12 concrete because that area was where the military was going to repair and maintain very heavy
13 equipment, including tanks.

14 15. Per the project specifications, the 6000 psi concrete was to achieve that degree of
15 strength after 28 days from the date of placement.

16 16. SBS was aware of the requirement for 6000 psi concrete, had represented to Frazier it
17 had prior history for this kind of concrete, and knew Frazier was looking to it to design and,
18 ultimately, to batch and supply a mix that would produce it.

19 17. SBS began batching its 6000 psi mix with steel fibers on August 24, 2012. Over the
20 course of hours, SBA delivered 28 truckloads to the site. Frazier's people placed and finished it.

21 18. As the concrete was being poured from the trucks, SBS took representative samples of
22 the wet concrete for later testing. KISAQ's testing laboratory, CTE, also took samples.

23 19. CTE tested some of its samples after 28 days and determined that compressive strength
24 was substantially lower than the required 6000 psi.

25 20. SBS tested some of its samples after 28 days, and they too were not close to 6000 psi.

26 21. On September 30, 2012, Frazier notified SBS that it had supplied nonconforming ready-
27 mix concrete and that SBS would be responsible for any costs to remedy.
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22. At SBS's suggestion, Frazier agreed to give the concrete more time and test again at 56 days. But, the samples tested at 56 days were only a little better than before, nowhere near the 6000 psi they needed.

23. SBS hired a concrete expert, Geoffrey Hichborn, who drilled out core samples from the slab and tested them for compressive strength 101 days after placement. Under an accepted industry protocol, if the core samples had averaged at least 85% of the designed strength, with no sample less than 75%, the slab would be acceptable. Hichborn's core tests achieved an average compressive strength of only 4,210 psi, well less than what was needed.

24. CTE also extracted core samples from the slab, and Frazier sent them to David Rothstein, a qualified concrete petrographer, for examination. Rothstein found air by volume of between 6% and 7.4%, significantly higher than the 4% mix design. That increased air caused a 10 to 15% loss of compressive strength. Although there was credible evidence of other missteps by SBS with the mix design, with the quality of some of the mix materials, and with the amounts of water added to certain batches at the batch plant, the primary reason for the heavy duty slab not achieving 6000 psi was the excess air.

25. This excess air was caused because SBS added entrained air. "Entrained air" is a liquid product that can be introduced to a mix to create microscopic air bubbles in the concrete. The project specifications did not call for entrained air. SBS now says that Frazier orally told them to do it. Frazier denies it, and no contemporaneous record supports SBS's assertion. No one told SBS to add air. SBS did it on its own volition.

26. SBS initially took responsibility for low compressive strength in the heavy duty slab, but changed its story after it became obvious that the passage of time would never bring it up to strength. Then, it placed all the blame on Frazier's placement and finishing of the concrete. That was coupled with the argument that it had no responsibility for mix design anyway, which should have been done by others.

27. Yes, SBS was responsible for mix design, and failed to deliver conforming 6000 psi concrete. No, Frazier's placement and finishing of the concrete, even to the extent it may have had some flaws, did not contribute to any loss of compressive strength.

28. It is not disputed by anyone that the 6000 psi concrete manufactured and delivered by SBS did not achieve the required 28-day compressive strength by 28, 56, or 101 days.

29. At the direction of the ACOE, KISAQ had Frazier remove and replace the heavy duty area of the slab. SBS did not challenge any item on Frazier's itemized list of the costs for this work: \$312,430.90. This amount was correctly backcharged to SBS.

30. SBS has unpaid invoices to Frazier of \$303,357.04. From that is to be deducted the invoices for the non-conforming 6000 psi concrete with steel fibers in the amount of \$43,220.16, plus sales tax on the taxable items of \$2,741.14, total \$45,961.30. The net, \$257,395.74 is owed by Frazier, and will be offset against Frazier's recovery from SBS. Subtracting the offset, Frazier's recovery is \$55,035.16.

31. SBS tried to find cover for its failures by pointing to alleged missteps of others (i.e. Frazier, KISAQ, the consulting engineer, etc.) in not fulfilling the letter of their contractual obligations. For example, KISAQ did not convene a "preinstallation" conference with all concerned before the pour. Plus, there was the error of not sending the "final" mix design to the ACOE for its formal approval. And, others. But, none of these failures excuses SBS. And, it is nothing but speculation to argue that the outcome would have been any different if others had followed project procedures to the letter.

CONCLUSIONS OF LAW

1. The sale of concrete is a sale of "goods," and the California Commercial Code controls.

2. SBS contracted to provide 6000 psi concrete to Frazier for the TEMF project, and it failed to do so. This was a material breach of contract and justified Frazier withholding monies otherwise owed to SBS.

3. Frazier was justified in removing and replacing the nonconforming concrete. In doing so it incurred reasonable costs in the amount of \$312,430.90. Those costs are damages recoverable from SBS.

4. SBS shall take nothing on its claims for breach of contract and for recovery on the Miller Act payment bonds. It is entitled payment of its unpaid invoices for conforming concrete and

1 materials supplied to Frazier. Of the \$303,357.07 in unpaid invoices, \$45,961.30 were charges for
2 the nonconforming 6000 psi concrete. Therefore, SBS's net unpaid charges are \$257,395.77.

3 5. Deducting \$257,395.77 from \$312,430.90 brings Frazier's recovery to \$55,035.13.

4 6. Frazier shall have judgment against SBS in the amount of \$55,035.13, plus costs and
5 prejudgment interest at the applicable rate.

6 7. Since SBS recovered nothing against them, KISAQ, Federal, and Western shall also have
7 judgment in their favor.

8 8. Any request for an award of attorney fees shall be addressed to the court by noticed
9 motion.

10 Dated: January 28, 2015



11 HOWARD R. LLOYD
12 UNITED STATES MAGISTRATE JUDGE
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14 Frazier shall prepare a proposed judgment.
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1 **C13-00469 HRL Notice will be electronically mailed to:**

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5 **Counsel are responsible for distributing copies of this document to co-counsel who have not**
6 **registered for e-filing under the court's CM/ECF program.**

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